REMARKS

Applicant appreciates the thorough examination of the present application that is reflected in the Official Action of August 22, 2005. In response, Claim 7 has been amended to correct the informality noted by the Examiner, and Claims 2 and 9-30 also have been canceled to advance prosecution, so that the rejections and objections related thereto have now become moot. Sole remaining independent Claim 1 has been amended by incorporating therein the recitations of Claim 3, and Claim 3 has been canceled. Applicant respectfully submits that Claim 1 is patentable for the reasons that now will be described.

In particular, Claim 3 stands rejected under 35 USC §103(a) over U.S. Patent 6,632,718 to Grider et al. in view of the Wolf et al. textbook, Page 834. (Applicant wishes to note that Claim 3 is also listed at Page 3 of the Detailed Action as being rejected under 35 USC §102, but this believed to be a typographical error because Grider et al. was not applied to Claim 3, at Page 4 of the Detailed Action.)

As amended, Claim 1 recites:

> ...wherein the first impurity region has higher impurity concentration than the second impurity region; and
> wherein the fourth impurity region has impurity concentration as high as the third impurity region.

The Official Action concedes at Page 10 that Grider et al. teaches "...that the first impurity region has higher impurity concentration that [sic] the second impurity region, but does not teach that the fourth impurity region has impurity concentration as high as the third impurity region." In an attempt to supply the missing teaching, the Official Action cites Wolf et al. However, the cited passages from Wolf et al. teach doping the source/drain extensions of <u>both</u> the NMOS and the PMOS devices with the same concentration as the respective source/drains (S/D). See Wolf et al., Page 834, the end of the first partial paragraph and the third full paragraph:

> ...In deep-submicron FETs, the doping concentration is increased in the SDE areas above the values used in the first process flow presented earlier. If the SDEs are also formed by ion implantation, the doping in them can again be characterized by the implant dose, which in the present process for <u>is raised to about $1\times10^{15}cm^{-2}$</u>....
> The spacer formation is carried out next. Typically LPCVD silicon nitride is used as the spacer material. The deposited nitride layer is then anisotropically etched-back, to form the spacer. At that point the heavily doped, deeper part of the source/drain regions are formed. This is done with ion implantation, using two masks, <u>so the NMOS S/D regions</u>

> are formed with one implant, and the PMOS S/D regions with the other (*Mask #7* and *Mask #8*, as shown in Figs. 16-27a and 16-27b). Doses of $1\text{-}5\times10^{15}cm^{-2}$ are used for this step. Note these regions have deeper junction depths than the SDEs (Fig. 16-28). The poly gates are also doped simultaneously by these implants. A single rapid-thermal annealing step is used to activate the implanted dopants in both the SDE and the heavily doped S/D regions. (Emphasis added.)

Accordingly, if Wolf et al. was substituted into Grider et al., then the claimed first impurity region would have impurity concentration as high as the second impurity region, and the fourth impurity region would have impurity concentration as high as the third impurity region. Stated differently, it would not be obvious to substitute the NMOS S/D regions of Wolf et al. into Grider et al. without also substituting the PMOS S/D regions of Wolf et al. into Grider et al., because Wolf et al. teaches that both the NMOS and PMOS S/D regions have the same impurity concentrations in the extension regions as in the S/D regions. Thus, the combination would not describe or suggest the recitations of Claim 1, wherein the first impurity region has higher impurity concentration than the second impurity region, but the fourth impurity region has impurity concentration as high as the third impurity region. For at least these reasons, amended Claim 1 is patentable over Grider et al. in view of Wolf et al. Remaining dependent Claims 4-8 are patentable at least per the patentability of Claim 1 from which they depend.

Accordingly, many of the claims have been canceled to advance the application to allowance, and Applicant has now shown that amend Claim 1 is patentable over Grider et al. in view of Wolf et al. Accordingly, Applicant respectfully requests allowance of the present application and passing the application to issue.

Respectfully submitted,

Mitchell S. Bigel
Registration No. 29,614
Attorney for Applicants

Customer Number 20792
Myers Bigel Sibley & Sajovec, P.A.
P.O. Box 37428
Raleigh, NC 27627
919-854-1400
919-854-1401 (Fax)

CERTIFICATION OF FACSIMILE TRANSMISSION UNDER 37 CFR § 1.8

I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office via facsimile number 571-273-8300 on November 18, 2005.

Susan E. Freedman
Date of Signature: November 18, 2005